

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1        1. (currently amended) A method for identifying an acoustic scene, ~~whereas the method comprises comprising the steps of:~~  
2              ~~that recording~~ an acoustic input signal; and preferably  
3              ~~recorded by at least one microphone~~  
4              ~~providing is processed in~~ at least two processing stages  
5              ~~wherein in such a manner~~  
6              —~~that an extraction phase is provided in at least one of~~  
7              ~~the at least two processing stages, in which said~~  
8              ~~extraction phase characteristic features are~~  
9              ~~extracted from the input signal, and wherein~~  
10             —~~that an identification phase is provided in each~~  
11             ~~processing stage, in which said identification phase~~  
12             ~~the extracted characteristic features are~~  
13             ~~classified, and further wherein~~  
14             ~~whereby class information is generated according to the~~  
15             ~~classification of the features in at least one of~~  
16             ~~the processing stages, which wherein said class~~  
17             ~~information characterizes or identifies the acoustic~~  
18             ~~scene.~~  
19  
20
- 1        2. (original) The method according to claim 1, wherein an extraction phase is provided in each processing stage, in which extraction phase characteristic features are extracted from the input signal.  
2  
3  
4

- 1        3. (currently amended) ~~The method according to claim 1, A~~  
2        method for identifying an acoustic scene, comprising the steps  
3        of:

4        recording an acoustic input signal; and  
5        providing at least two processing stages wherein  
6        an extraction phase is provided in at least one of the at  
7        least two processing stages, in which said  
8        extraction phase characteristic features are  
9        extracted from the input signal, and wherein  
10      an identification phase is provided in each processing  
11      stage, in which said identification phase the  
12      extracted characteristic features are classified,  
13      and further wherein  
14      class information is generated according to the  
15      classification of the features in at least one of  
16      the processing stages, wherein said class  
17      information characterizes or identifies the acoustic  
18      scene,  
19      wherein a manner of processing in a processing stage is  
20      selected according to the class information obtained  
21      in another processing stage.

1        4. (currently amended) The method according to claim 2, A  
2        method for identifying an acoustic scene, comprising the steps  
3        of:  
4        recording an acoustic input signal; and  
5        providing at least two processing stages wherein  
6        an extraction phase is provided in at least one of the at  
7        least two processing stages, in which said  
8        extraction phase characteristic features are  
9        extracted from the input signal, and wherein  
10      an identification phase is provided in each processing  
11      stage, in which said identification phase the  
12      extracted characteristic features are classified,  
13      and further wherein  
14      class information is generated according to the  
15      classification of the features in at least one of

16       the processing stages, wherein said class  
17       information characterizes or identifies the acoustic  
18       scene, and wherein an extraction phase is provided  
19       in each processing stage, in which extraction phase  
20       characteristic features are extracted from the input  
21       signal, and further wherein  
22       a manner of processing in a processing stage is selected  
23       according to the class information obtained in  
24       another processing stage.

1       5. (currently amended) The method according to claim 2, A  
2       method for identifying an acoustic scene, comprising the steps  
3       of:  
4       recording an acoustic input signal; and  
5       providing at least two processing stages wherein  
6       an extraction phase is provided in at least one of the at  
7       least two processing stages, in which said  
8       extraction phase characteristic features are  
9       extracted from the input signal, and wherein  
10       an identification phase is provided in each processing  
11       stage, in which said identification phase the  
12       extracted characteristic features are classified,  
13       and further wherein  
14       class information is generated according to the  
15       classification of the features in at least one of  
16       the processing stages, wherein said class  
17       information characterizes or identifies the acoustic  
18       scene, and wherein an extraction phase is provided  
19       in each processing stage, in which extraction phase  
20       characteristic features are extracted from the input  
21       signal, and further wherein  
22       the class information obtained in the identification  
23       phase of a processing stage i determines a

24                   processing manner in one of the following, inferior  
25                   processing stages i+1.

1                 6. (original) The method according to claim 3, wherein  
2                 the class information obtained in the identification phase of  
3                 a processing stage i determines a processing manner in one of  
4                 the following, inferior processing stages i+1.

1                 7. (original) The method according to claim 4, wherein  
2                 the class information obtained in the identification phase of  
3                 a processing stage i determines a processing manner in one of  
4                 the following, inferior processing stages i+1.

1                 8. (original) The method according to claim 5, wherein,  
2                 according to class information obtained in the processing  
3                 stage i, specific features are selected in the extraction  
4                 phase of the following, inferior processing stage i+1 and/or  
5                 specific classification methods are selected in the  
6                 identification phase of the following, inferior processing  
7                 stage i+1.

1                 9. (original) The method according to claim 6, wherein,  
2                 according to class information obtained in the processing  
3                 stage i, specific features are selected in the extraction  
4                 phase of the following, inferior processing stage i+1 and/or  
5                 specific classification methods are selected in the  
6                 identification phase of the following, inferior processing  
7                 stage i+1.

1                 10. (original) The method according to claim 7, wherein,  
2                 according to class information obtained in the processing  
3                 stage i, specific features are selected in the extraction  
4                 phase of the following, inferior processing stage i+1 and/or  
5                 specific classification methods are selected in the

6 identification phase of the following, inferior processing  
7 stage i+1.

1       11. (original) Method according to claim 1, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       12. (original) Method according to claim 2, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       13. (original) Method according to claim 3, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       14. (original) Method according to claim 4, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       15. (original) Method according to claim 5, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       16. (original) Method according to claim 6, wherein a

2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       17. (original) Method according to claim 7, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       18. (original) Method according to claim 8, wherein a  
2 post-processing phase is provided in at least one processing  
3 stage subsequent to the extraction phase, in which  
4 postprocessing stage the class information are revised in  
5 order to generate revised class information.

1       19. (currently amended) The method according to claim 1,  
2 wherein one or more of the following classification methods is  
3 used in the identification phase:

4       -Hidden Markov Models;  
5       -Fuzzy Logic;  
6       -Bayes Classifier;  
7       -Rule-based Classifier  
8       -Neuronal Networks; and  
9       -Minimal Distance.

1       20. (original) Method according to claim 1, wherein  
2 technical and/or auditory-based features are extracted in the  
3 extraction phase.

1       21. (original) Use of the method according to one of the  
2 claims 1 to 20 for the adjustment of at least one hearing  
3 device to a momentary acoustic scene.

1        22. (original) Use of the method according to claim 21,  
2 wherein a hearing program or a transfer function between at  
3 least one microphone and a speaker in a hearing device is  
4 selected according to a determined acoustic scene.

1        23. (original) Use of the method according to one of the  
2 claims 1 to 20 for speech analysis or speech detection.

1        24. (canceled).

1        25. (currently amended) The device according to claim 42  
2 ~~24~~, further comprising a feature extraction unit in each  
3 processing stage.

1        26. (currently amended) The device according to claim 42  
2 ~~24~~, wherein the class information is fed to other processing  
3 stages.

1        27. (original) The device according to claim 25, wherein  
2 the class information is fed to other processing stages.

1        28. (currently amended) The device according to claim 42  
2 ~~24~~, wherein the class information of a processing stage i is  
3 fed to a following, inferior processing stage i+1.

1        29. (original) The device according to claim 25, wherein  
2 the class information of a processing stage i is fed to a  
3 following, inferior processing stage i+1.

1        30. (original) The device according to claim 26, wherein  
2 the class information of a processing stage i is fed to a  
3 following, inferior processing stage i+1.

1        31. (original) The device according to claim 27, wherein

2 the class information of a processing stage i is fed to a  
3 following, inferior processing stage i+1.

1       32. (original) The device according to claim 28, wherein  
2 the class information of a processing stage i is fed to a  
3 feature extraction unit of a following, inferior processing  
4 stage i+1, and/or wherein the class information of a  
5 processing stage i is fed to a classification unit of a  
6 following, inferior processing stage i+1.

1       33. (original) The device according to claim 29, wherein  
2 the class information of a processing stage i is fed to a  
3 feature extraction unit of a following, inferior processing  
4 stage i+1, and/or wherein the class information of a  
5 processing stage i is fed to a classification unit of a  
6 following, inferior processing stage i+1.

1       34. (original) The device according to claim 30, wherein  
2 the class information of a processing stage i is fed to a  
3 feature extraction unit of a following, inferior processing  
4 stage i+1, and/or wherein the class information of a  
5 processing stage i is fed to a classification unit of a  
6 following, inferior processing stage i+1.

1       35. (original) The device according to claim 31, wherein  
2 the class information of a processing stage i is fed to a  
3 feature extraction unit of a following, inferior processing  
4 stage i+1, and/or wherein the class information of a  
5 processing stage i is fed to a classification unit of a  
6 following, inferior processing stage i+1.

1       36. (currently amended) The device according to one of  
2 the claims 24 25 to 35 and 42, wherein the class information  
3 obtained in at least one processing stage is fed to a post-

4 processing unit in order to generate revised class  
5 information.

1       37. (currently amended) The device according to claim 42  
2 ~~24~~ or 25, wherein the class information of all processing  
3 stages is fed to a decision unit.

1       38. (original) The device according to claim 37, wherein  
2 the decision unit is operatively connected to at least one of  
3 the feature extraction units and/or to at least one of the  
4 classification units.

1       39. (currently amended) A hearing device with a transfer  
2 unit operatively connected to at least one microphone and to a  
3 converter unit, in particular to a speaker, and with a device  
4 according to one of the claims ~~24~~ 25 to 35 and 42 for  
5 generating class information, whereas the class information is  
6 fed to the transfer unit.

1       40. (currently amended) The hearing device according to  
2 claim 39, further comprising an input unit which is  
3 operatively connected to the transfer unit and/or with the  
4 device according to one of the claims ~~24~~ 25 to 35 and 42.

1       41. (currently amended) The hearing device according to  
2 claim 40, comprising a wireless link between the input unit  
3 and the transfer unit and/or between the input unit and the  
4 device according to one of the claims ~~24~~ 25 to 35 and 42,  
5 respectively.

1       42. (new) A device for identifying an acoustic scene in  
2 an input signal, the device comprising:  
3       - at least two processing stages;

4        - a feature extraction unit in at least one of the at  
5              least two processing stages; and  
6        - a classification unit in each one of said at least two  
7              processing stages, wherein  
8              the input signal is fed to the feature extraction unit,  
9              an output of which is at least fed to one of the at  
10             least two classification units, and wherein at least  
11             one of the at least two classification units is  
12             operatively connected to at least another of the at  
13             least two classification units in order to adjust  
14             processing according to class information in another  
15             processing stage.